## Five-Year Review Report

Second Five-Year Review Report for Arkansas City Dump Site Arkansas City, Kansas

August 2002

Prepared By:
Kansas Department of Health and Environment
Bureau of Environmental Remediation
Topeka, Kansas

Approved by:

Date:

Michael J. Sanderson

Director

Superfund Division

9-24-02

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#### **List of Acronyms**

CERCLA Comprehensive Environmental Response Compensation and Liability Act

EPA U.S. Environmental Protection Agency ESD Explanation of Significant Difference

FY Fiscal Year

KDHE/BER Kansas Department of Health and Environment/Bureau of Environmental

Remediation

KDHEL Kansas Department of Health and Environment Laboratories

NCP National Oil and Hazardous Substances Pollution Contingency Plan

NPL National Priority List

OU Operable Unit

pH Power of hydrogen (negative log base 10 of the hydrogen ion concentration)

RA Remedial Action

RAOs Remedial Action Objectives

RCRA Resource Conservation and Recovery Act

ROD Record of Decision

SARA Superfund Amendment Reauthorization Act

SSC State Superfund Contract

#### **Executive Summary**

The remedy for the Arkansas City Dump Superfund Site in Arkansas City, Kansas called for neutralization and stabilization of acid waste, covering the treated waste with a vegetative cap, and using institutional controls to prevent future disturbance of the waste. The site achieved construction completion on September 8, 1992. The first 5-year review report was signed by the EPA Superfund Division Director, Michael J. Sanderson, on August 22, 1997. This second 5-year review was initiated for completion within five years of the first 5-year review.

The assessment of this 5-year review reached the same conclusions as the previous 5-year review. That assessment is that the remedy was constructed in accordance with the requirements of the Record of Decision (ROD). A second Record of Decision was issued to express the determination that the remedy expressed in the ROD for Operable Unit 1 (OU 1) was sufficient to provide protectiveness for the entire site and no additional actions were required. Threats relative to CERCLA appear to have been remediated, although refinery-related waste has been left in place at the site. The site has been removed from the National Priority List (NPL). This document recommends that a third five-year review be completed in 2007. If after the third five-year review, and confirmation through sampling that the acid waste is neutralized, it may be recommended that no additional 5-year reviews be conducted.

### **5-Year Review Summary Form**

		SITE IDI	ENTIFICATION			
Site name (from WasteLAN): Arkansas City Dump						
EPA ID (from WasteLAN): KSD980500789						
Region: 7	Region: 7 State: KS City/County: Arkansas City/Cowley					
	SITE STATUS					
NPL status: _	Final <u>X</u> Delet	ed	Other (specify)			
Remediation sta	atus (choose all that apply)	Unc	ler ConstructionOperatingX Complete			
Multiple OU	s?YES <u>X</u> NO	Constru	action Completion Date 9 /08/1992			
Has site been	put into reuseYI	ES X	NO			
		REVI	EW STATUS			
Lead agency:	EPA X State	Tribe	Other Federal Agency			
Author name	: Robert J. Weber					
Author title:	Author title: Environmental Geologist  Author affiliation: Kansas Dept. of Health and Env.					
Review Perio	od: <u>May 2002 to Augus</u>	st 2002				
Date(s) of sit	e inspection: 5/1/02 ar	nd 7/3/02	<u>2</u>			
Type of review: X Post SARAPre-SARANPL-Removal OnlyNon-NPL Remedial Action SiteNPL State/Tribe-leadRegional Discretion						
Review num	ber:1 (first)X	2 (secon	d)3 (third)Other (specify)			
Triggering A	ction:					
Actual RA On-site Construction at OU #Actual RA Start at OU# Construction CompletionActual RA Start at OU# Yerevious Five-Year Review Report Other (specify)						
Triggering ac	Triggering action date(from WasteLAN) <u>8/22/1997</u>					
Due date (five years after triggering action date): 8/22/2002						

#### Five-Year Review Summary Form, cont'd.

#### **Issues:**

No issues are present at the site. The site is well maintained and all posting is in place. The cover appears to be in good condition. A gravel drive that was present on as-built drawings is located over a portion of the northern cover, but no settling has been observed. The site has been moved and is unused.

#### **Recommendations and Follow-up Actions:**

Hazards at this site have been remediated. There are still remaining solid waste issues with the material buried at the site. The city, in coordination with the state, will continue to monitor this as it would any other non-hazardous solid waste landfill. The city's restrictions currently in place will enable the city to deal with any continuing aesthetic or non-hazardous solid waste issues. Any future use of the site should be compatible with these issues. KDHE/BER will issue the city a letter transmitting these conclusions and recommendations and attach a copy of this Five-Year Review Report.

Given the waste remaining in place, KDHE/BER recommends an additional Five-Year Review. At the time of the future Five-Year Review and assuming that the waste is confirmed to be neutralized, a determination can be made whether or not to discontinue future Five-Year Reviews.

#### **Protectiveness Statement(s):**

Immediate threats at the site have been addressed and the remedy is protective of human health and the environment. The acid hazardous waste has been neutralized via the remedial action. No additional threat from CERCLA hazardous wastes is known to be present.

#### **Long-term Protectiveness:**

The long-term protectiveness of the Remedial Action was demonstrated during the previous Five-Year Review. Conditions have not changed and the site remains protective and there are no foreseeable conditions that will result in the Remedial Action failing. Remedial action objectives have been achieved and the long-term protectiveness of the site is assured.

#### **Other Comments:**

No other comments required.

#### Arkansas City Dump Superfund Site Arkansas City, Kansas Second/Final Five-Year Review Report

#### I. Introduction

The purpose of the Five-Year Review is to determine whether the remedy at a site is protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in Five-Year Review reports. In addition, Five-Year Review reports identify issues found during the review, if any, and identify recommendations to address them.

This Five-Year Review report is prepared pursuant to CERCLA §121 and the National Contingency Plan (NCP). CERCLA §121 states:

If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgement of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews.

The U.S. Environmental Protection Agency (EPA) interpreted this requirement further in the NCP; 40 CFR §300.430(f)(4)(ii) states:

If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.

In coordination with EPA, the Kansas Department of Health and Environment/Bureau of Environmental Remediation (KDHE/BER) conducted the second Five-Year Review of the remedy implemented at the Arkansas City Dump Superfund Site in Arkansas City, Kansas. This review was conducted by the state's project manager for the site from May through July 2002. This report documents the results of the review.

This is the second Five-Year Review of the Arkansas City Dump Site. The triggering action for this statutory review is the date of the previous Five-Year Review dated August 22, 1997.

## II. Site Chronology

A chronology of site events is presented below in tabular format.

Event	Date
Milliken Company operated Oil Refinery on site	1916-1925
Fire destroyed much of the refinery	1925
Others continued using the refinery and cracking plant	1925-1931
Unregulated disposal of domestic and solid waste intermittently	1931-1981
Site proposed for NPL	12/30/1982
Final listing on NPL	09/08/1983
First Remedial Investigation completed	04/01/1983
Second Remedial Investigation completed	08/30/1986
Record of Decision OU 1	09/29/1988
Proposed Plan document prepared for OU 2 ROD	08/04/1989
Record of Decision OU 2 Final Decision	09/21/1989
Remedial Design complete	09/10/1991
Remedial Action commences	09/10/1991
Award of Contract 09/10/1991 - Start of Remedial Action -5 year review trigger	09/10/1991
RA physical construction completed	08/12/1992
Pre-Final Inspection	08/19/1992
Close Out Report signed (Construction Completion Achieved)	09/08/1992
Site Deleted from NPL	03/01/1996
First Five-Year Review Completed	08/22/1997

#### III. Background

#### **Physical Characteristics**

The Arkansas City Dump site consists of approximately 200 acres. Only an area of approximately three acres required treatment. The site is in the western portion of Arkansas City, Kansas adjacent to the Arkansas River and Highway 166 (also known as Madison Street). Figures 1 and 2 present the location of the site. Arkansas City is a city of about 12,500 residents located in Cowley County. Most of the site and all of the portion where remediation was required is located south of Madison Street. A small deposit of sludge that was not acidic and did not require treatment was found beneath the surface immediately north of Madison Street, also adjacent to the river. The land that contains the treated soil is owned by Sybrant Warehouse and the City of Arkansas City.

#### Land and Resource Use

From 1916 to 1931 the primary use of the site was as an oil refinery and cracking plant. From 1931 to 1981 the site was generally abandoned and the major activity was unregulated dumping of domestic and solid waste. Figure 3 presents the general historic features of the site. Some small businesses have occupied portions of the site but the remediated waste cells occupy portions of the site that have not been used since the abandonment. Superfund regulated waste was treated during the remedial action. Figure 4 presents the areas of treated waste. Petroleum products remain at the site but these are excluded from the regulatory authority of CERCLA. The cells where the acid waste was neutralized, *i.e.* where the remedial action took place, are covered with a vegetative cap and clearly posted with signs.

The acid waste subject to CERCLA authorities has been remediated. Groundwater was not a CERCLA issue at this site. Petroleum products in soil and groundwater within the site area, if determined to pose a threat to human health and the environment, may be addressed by a state program.

#### **History of Contamination**

The oil refinery operations at the Arkansas City Dump site resulted in two principal waste types. Only one of these waste types was subject to the CERCLA regulations the other relates to petroleum products which are specifically excluded from the CERCLA authority. The refining operations generated acidic sludge wastes, which were buried on the site, or simply abandoned at the ground surface. Some of the wastes were acidic enough to be classified as hazardous wastes because of their low pH under the Resource Conservation And Recovery Act (RCRA). Also, some of these waste are also identified as process hazardous wastes under RCRA. The Superfund remedial action addressed these types of releases.

#### **Initial Response**

Only one response action was undertaken at this site. The original plan was to initiate action to stabilize the acidic sludge under Operable Unit 1 (OU 1) and develop a final remedy to address all issues at the site under Operable Unit 2 (OU 2). Once the initial action (OU 1) was completed it was determined that no action would be required for OU 2, therefore OU 2 was a no action Record of Decision.

#### **Basis for Taking Action**

The sole basis for taking action at this site under CERCLA authorities was that the wastes on site were acidic enough to be classified as hazardous wastes because of their low pH under RCRA. Exposures to soil from the site were associated with a risk due to the low pH of the acidic waste buried at the site. Other risks at the site were due to substances falling under the *petroleum exclusion* of CERCLA/SARA.

#### IV. Remedial Actions

#### **Remedy Selection**

The remedy for the site was selected in the Record of Decision (ROD) signed on 9/29/88 by the EPA Regional Administrator, Morris Kay. An Explanation of Significant Difference (ESD) for the first ROD was implemented to accommodate a technical difficulty in executing the original ROD. This did not affect the remedy or the outcome of the remedy only the technical and physical means of implementation. A subsequent Record of Decision for the remainder of the site, signed on 9/19/89, was a no action ROD. The determination that no additional action was required was based on the limited authority under CERCLA/SARA to deal with contaminants designated under the *petroleum exclusion*. Thus the OU 1 remedial action is the only action that is to be involved with the five-year review. The 1988 ROD did not specifically state the Remedial Action Objectives, but from context they are as follows:

- Neutralize acid sludge to render the sludge non-hazardous.
- Use a technique for neutralizing sludge to minimize or eliminate the release of sulfur dioxide gas.
- Cover treated sludge to prevent any contact with neutralized sludge in the case some hazard remains as a result of incomplete neutralization.
- Initiate institutional controls that prohibit actions that would impact the neutralized sludge in the future.

The institutional controls were initially required to ensure that the treated material was not disturbed. Additional study of the remainder of the site to determine if there was other CERCLA

waste that required treatment made it prudent to restrict access. As it turned out later, the determination was made that there was no other CERCLA waste other than the acidic sludge. The institutional controls were not immediately lifted in order to ensure that all of the CERCLA waste had been neutralized. Investigations completed during the first five-year review demonstrated that CERCLA waste had been neutralized.

#### **Remedy Implementation**

This was an EPA fund-lead site. Once the execution of the site-specific State Superfund Contract (SSC) for the site was complete, the action was initiated. The SSC was completed on September 23, 1991. Remedial action began in December of 1992. The selected remedy incorporated exposing small portions of the acid sludge and mixing a strong base, lime, with the sludge to neutralize the sludge. After mixing the sludge was then covered and a new quantity of acid sludge was exposed for neutralization. This process greatly reduced the amount of sulfur dioxide released to the atmosphere and thus improved the quality from not only a health perspective but from an aesthetic one as well. Once the acidic sludge was neutralized, a cover to allow vegetation was placed over the treated area.

#### **System Operation/Operation and Maintenance**

There has been no need for an ongoing Operations and Maintenance function other than mowing and inspection of the cover. The city has maintained the site under an agreement with the State of Kansas.

#### I. Progress Since Last Five-Year Review

Since the last five-year review, the site has been deleted from the NPL. The cover remains effective, there is no evidence that there has been any change in the site since the last five-year review, and the institutional controls are still intact. No additional activity has been performed at the site.

#### II. Five-Year Review Process

#### **Administrative Component**

In the Spring of FY 2002 the site was reassigned to Robert J. Weber of KDHE/BER, with the sole purpose of ensuring that the upcoming Five-Year Review was completed. The Five-Year Review was initiated with a file review and site visits on May 1 and July 3, 2002 and was completed with the signing of the five-year review report with a signature page attached to this report.

#### **Community Involvement**

A notice was submitted by the KDHE Public Information Office on June 28, 2002 to Sedgwick and Cowley County media including the Associated Press, the Harris News Service, the

Kansas Information Network/WIBW Radio, and the Mid-America News Network. The local newspaper, The Arkansas City Traveler, published the notice on July 1, 2002. The community was notified that a Five-Year review was being conducted for the Arkansas City Dump. A brief description and location of the site along with work to be performed was provided. Contact information was provided should any community members wish to obtain more information or participate in the Five-Year Review. A copy of the notice is attached as Appendix A.

#### **Document Review**

Documents reviewed for this Five-Year Review by EPA and KDHE/BER included the ROD for OU 1, the No Action ROD for OU2, the previous five-year review report, and the NPL deletion package for the site.

#### **Data Review**

No new data has been developed since the last Five-Year Review. Previous file data was reviewed to determine whether there was reason to believe that additional data was required. It was determined that the data at hand were sufficient.

#### **Site Inspection**

Site inspections were carried out on May 1 and July 3, 2002. A copy of the Five-Year Review Site Inspection Checklist is attached as Appendix B. During the first site inspection on May 1, 2002, the project manager visited the site to get a general overview of the location and determine the condition of the cover as well as the activities on and around the site. The site cover was intact and vegetated, with no evidence of significant erosion. The site remains unoccupied. There does not appear to be any immediate likelihood for the site or its immediate area to undergo any significant land use change in the foreseeable future. There is no evidence that any of the institutional controls for the site have been violated. A second site inspection visit was performed on July 3, 2002 during soil sampling activities. The second site inspection confirmed the observations of the first site inspection.

During the first site visit, surface water samples were collected for onsite pH analysis. Whatman pH test strips were immersed in the surface water for one minute. The test strips were then removed and compared to a colorimetric slide for the appropriate pH value. Figure 5 presents the locations of surface water sampling. The pH analysis results were 7 for each sample collected. Table 1 presents the results of surface water onsite analysis. Each location was sampled twice to confirm the previous result. Based on the results in Table 1, no acidic surface waters were observed onsite.

During the second site visit, soil samples were collected for offsite laboratory analysis. A KDHE/BER Geoprobe 5400 drilling rig was used to advance a four-foot Macro core sampler with a single-use disposable acetate sample liner into the treated waste. The vertical soil profile was visually logged from ground surface to the total depth, 12 feet, of each boring. Soil boring logs are

provided in Appendix C. Upon completion of soil sampling activities, soil borings were plugged with bentonite. Soil samples were collected from the four-to-five-foot depth interval and the nine-to-ten-foot depth interval. Samples were transferred from the acetate sample liner into laboratory-provided containers. The containers were labeled, placed into individual plastic bags, stored in a cooler with ice, and delivered to KDHE Laboratories (KDHEL) on the same day under chain-of-custody protocol. Copies of the KDHEL chain-of-custody forms are provided in Appendix D. The results of pH soil analysis indicate that the remedy is performing as designed. Values of pH in soil ranged from 6.30 to 12.47. RCRA guidelines consider wastes that have pH values of less than 2 or greater than 12.5 to be corrosive and hazardous. No samples collected for pH analyses exceeded these ranges. Table 2 and Appendix E present the results of soil pH analysis.

#### **Interviews**

During the site inspections, the project manager interviewed city employees. There was general agreement that the site had remained undisturbed. They also indicated that the site would not be subject to pressure for use change in the near future. The community as a whole is not in a cycle of growth and there are additional more desirable lands for development if the trend shifts towards the positive.

#### III. Technical Assessment

#### Question A: Is the remedy functioning as intended by the decision documents?

The neutralization of the acid sludge prescribed in the ROD for OU 1 was accomplished at the time of the remedial action. No additional activity was/is necessary to treat that contaminant/hazard. The ROD for OU 2 called for no additional action. The institutional controls were established in OU 1 until the actions expected to be prescribed in OU 2 could be implemented. The ROD for OU 2 called for no further action, however the institutional controls are still in place and functioning,.

Since no additional action is required at this site there is no opportunity for system optimization.

## Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid?

There have been no changes in the physical conditions at the site that would affect the protectiveness of the remedy. Nor have there been any changes in the relative standards, exposure pathways, toxicity or other contaminant characteristics that would change the decisions previously made.

## Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

There has not been any information that has come to light that would call into question the protectiveness of the remedy.

#### **Technical Assessment Summary**

Based on the data reviewed, the site inspections, and interviews, the remedy is functioning as intended in the ROD. There have been no changes to the site that would affect the protectiveness of the remedy. There is no other information that calls into question the protectiveness of the remedy.

#### IV. Issues

There are no issues concerning this remedy.

#### V. Recommendations and Follow-Up Actions

KDHE/BER recommends performing an additional Five-Year Review prior to discontinuing the Five-Year Review process at the site. At the time of the future Five-Year Review, if no new findings are presented that determine the site to be unprotective of human health and the environment, the site will be proposed to be removed from the Five-Year Review process. This decision will be based on the continued validity of the following findings.

- No CERCLA hazardous substance remains at this site
- The site has been de-listed from the NPL
- Previous five-year review has not identified any potential for adverse effect on the public health or the environment, due to any contaminant subject to CERCLA authority.
- Current Five-Year Review has similar findings to previous Five-Year Review

KDHE/BER recommends that City of Arkansas City retain institutional controls at site. This recommendation is based on the following.

- Solid waste is buried at the site
  - Disturbing solid waste may result in odor problems
  - Disturbing solid waste may result in aesthetic problems
  - There may be some unknown hazardous components to the solid waste
- Some petroleum product waste is most likely still present
  - Currently contained contaminants may be mobilized by disturbance
  - Odor problems may result from disturbance
  - Change in situation may result in greater infiltration

• Disruption of cap may result in a change of conditions that will disturb the natural attenuation process currently containing petroleum products on site.

#### X. Protectiveness Statement

The remedy is protective of human health and the environment. No CERCLA regulated contaminants are known to remain on site. The threats that can be addressed by CERCLA have been removed and the RAOs have been met. No additional action is required. Therefore: "Because the remedial actions at all OUs are protective, the site is protective of human health and the environment."

#### **XI.** Next Review

The next Five-Year Review is to be completed five years after the signature date of this five year review.

**TABLES** 

#### Table 1

Results of Surface Water Analysis
Second Five-Year Review
Arkansas City Dump/Old Milliken Refinery
1409 W. Madison Street (Northern Waste Pit) and
City Property Immediately South (Visible Waste Area)
Arkansas City, Kansas

by

The Kansas Department of Health and Environment/Bureau of Environmental Remediation 1000 SW Jackson Street, Suite 410, Topeka, Kansas 66612-1367

for

The U.S. Environmental Protection Agency, Region VII 901 North 5th Street, Kansas City, Kansas 66101

#### Page 1 of 1

Sample Identification	Onsite Analysis (repeated two times each)		
	pH (negative log base 10 of the hydrogen ion concentration (H*) ) unitless		
Whatman pH Test Strip Colorimetric Method			
Culvert #4 (North-South Concrete Drainage Tube)	7		
Culvert #5 (East-West Concrete Drainage Tube)	7		
Concrete-Paved Ditch Rip-Rap Outfall	7		
Southwest Runoff Collection/Settling Pond	7		

#### Table 2

# Results of Soil Analysis Second Five-Year Review Arkansas City Dump/Old Milliken Refinery 1409 W. Madison Street (Northern Waste Pit) and City Property Immediately South (Visible Waste Area) Arkansas City, Kansas

by

The Kansas Department of Health and Environment/Bureau of Environmental Remediation 1000 SW Jackson Street, Suite 410, Topeka, Kansas 66612-1367

#### for The U.S. Environmental Protection Agency, Region VII 901 North 5<sup>th</sup> Street, Kansas City, Kansas 66101

#### Page 1 of 1

Sample Identification	Offsite Laboratory Analysis		
	pH (negative log base 10 of the hydrogen ion concentration (H <sup>+</sup> )) unitless		
EPA Method SW-846 9040			
B-1 (4-5')	8.16		
B-1D (14-15') duplicate of B-1 (4-5')	8.10		
B-1 (9-10')	8.77		
B-2 (4-5')	12.41		
B-2 (9-10')	6.30		
B-3 (4-5')	12.44		
B-3D (14-15') duplicate of B-3 (4-5')	12.39		
B-3 (9-10')	12.39		
B-4 (4-5')	8.32		
B-4 (9-10')	12.47		
Quality Assurance/Quality Control Samples	by EPA Method 150.1		
Trip Blank-1	6.06		
Rinseate Blank-1	6.00		

**FIGURES** 

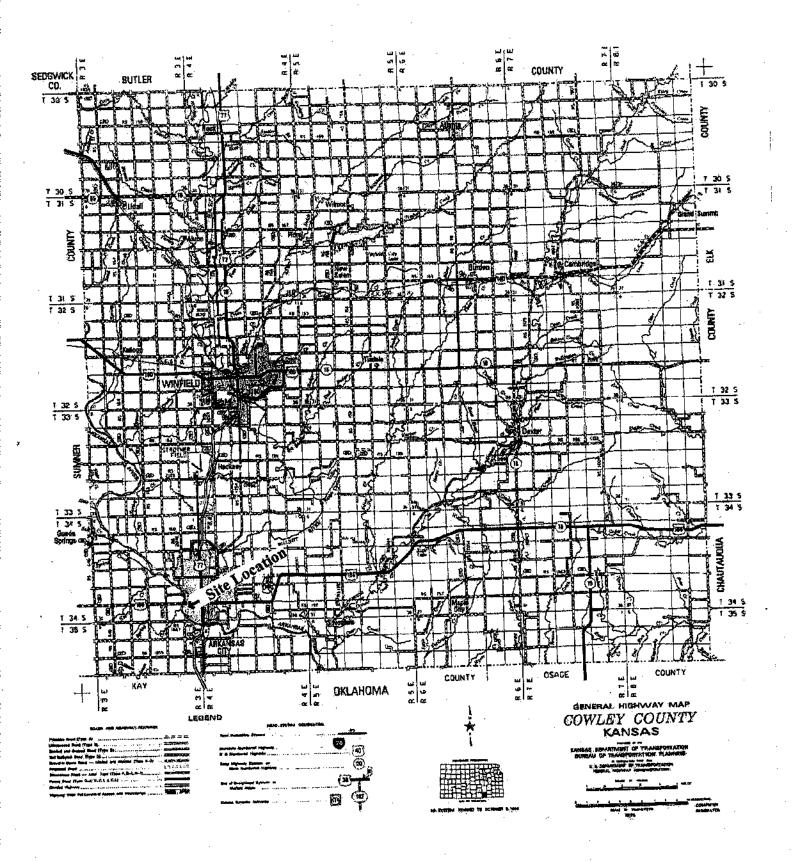
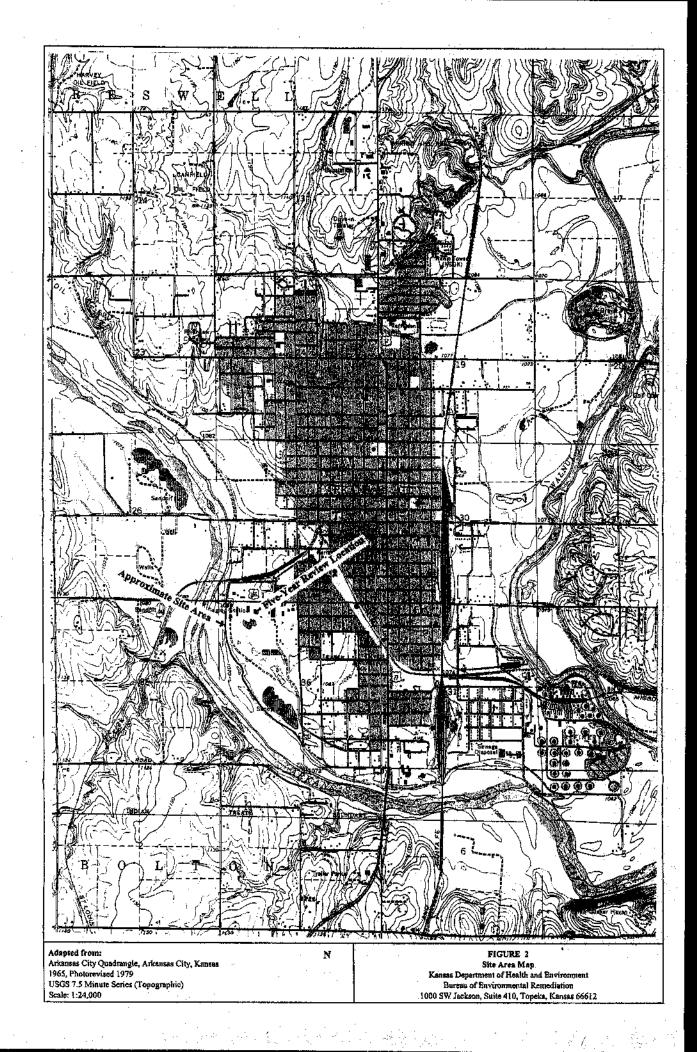
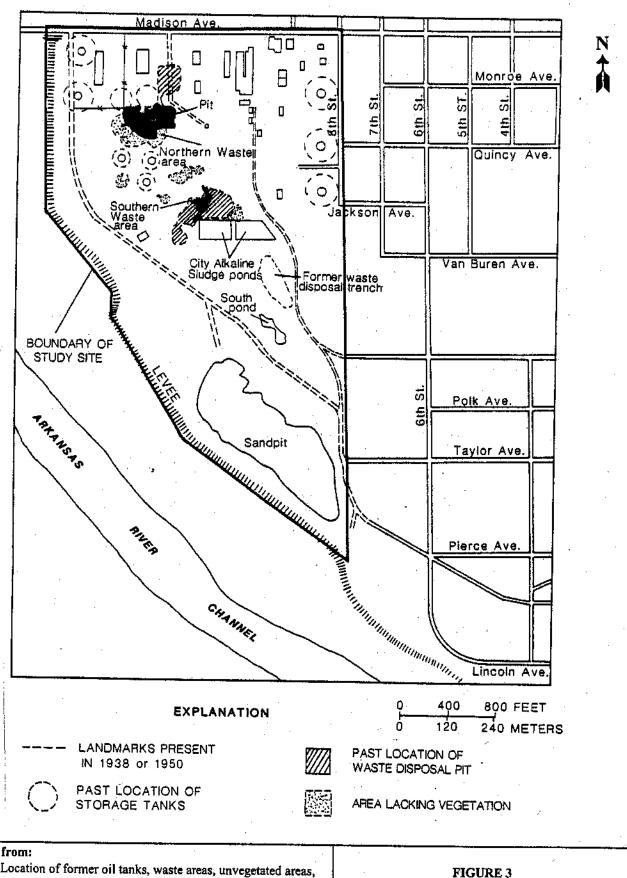


Figure 1
Site Location Map

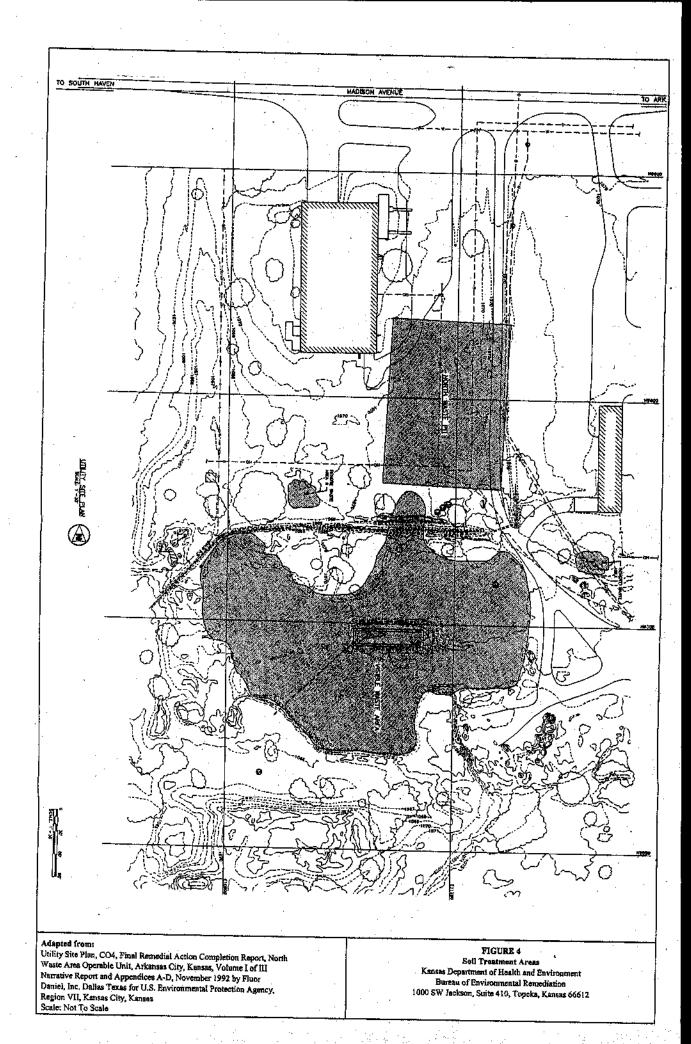


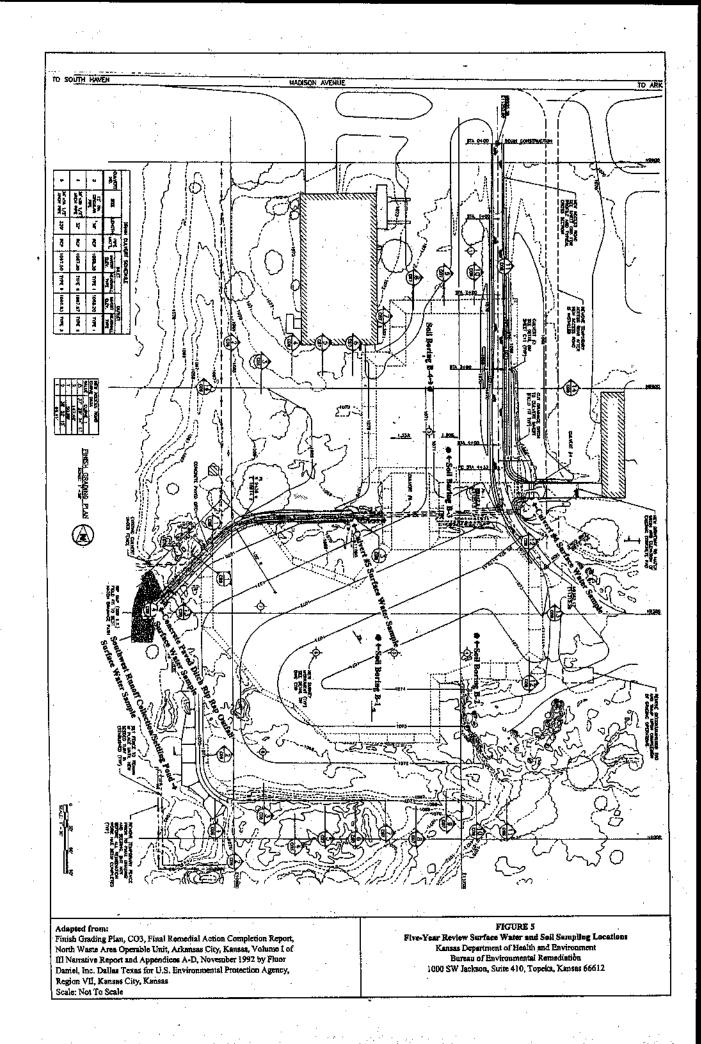


#### Adapted from:

Figure 3, Location of former oil tanks, waste areas, unvegetated areas, and selected features of Arkansas City waste site (Phase-IIA Remedial Investigation of the Arkansas City Dump Site, Provisional Draft, Volume I, August 1986, Arkansas City, Kansas, U.S. Geological Survey, Lawrence, Kansas)
Scale: Not to Scale (NTS)

Historic Site Features Map
Kansas Department of Health and Environment
Bureau of Environmental Remediation
1000 SW Jackson, Suite 410, Topeka, Kansas 66612





APPENDICES

APPENDIX A

## KDHE Public Information Office News Release Record

Topic: KDHE Per	forms Five-Year Assessment of Site	File Number: 0
Author: Mike	· · · · · · · · · · · · · · · · · · ·	<b>Date:</b> June 28, 2002
Approvals:	Mike Heideman Originator Director <u>Ron Hammerschmidt,</u> Secretary Graeber/Sharon Patno	<del>"</del>
Courtesy Cop	Originator	achmidt
Media: Environme	Fax to Sedgwick and Cowley Co  x 409 Associated Press (when ma x 351 Carol Crupper, Harris News S x 277 Kansas Information Network x 414 Mid-America News Network (which is a second to these media on envi	iled) ervice (when mailed) WIBW Radio (when mailed) when mailed)
739 EP	the contract of the contract o	_ 639 R.P. Publishing

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	_ 154 Ranney, LJW (all attachments _ 738 Dept. on Aging	) 736 LTC Ombudeman's Office 651 KABC	
	_ 653 KAH6A	655 KHCA	

DEPARTMENT OF HEALTH & ENVIRONMENT

**BILL GRAVES, GOVERNOR** 

Clyde D. Graeber, Secretary

For Immediate Release June 28, 2002

Contact: Rob Weber, Project Manager

785-296-8801

KDHE Performs Five-Year Review of Former Refinery Site

The Kansas Department of Health and Environment (KDHE) has begun a five-year environmental review at the site of the former Arkansas City Dump Site/Old Milliken Refinery. The site is located east of the Arkansas River and both north and south of Madison Ave. in Arkansas City.

"This type of review determines if a previous cleanup is still performing as designed," said Environmental Geologist Rob Weber, KDHE project manager for the site. "The focus of this five-year review will be an area of treated soil at 1409 S. Madison Ave. and city property located immediately to the south. In 1992, the EPA neutralized acidic sludge from the former petroleum refinery with cement kiln dust, and then placed it into two containment areas. These areas were then capped with clay soil and seeded with grass."

The areas have been maintained with signs and regular mowing of the grass cover since completion in 1992. The first five-year review performed for the site in 1997 by KDHE concluded that no acidic sludge was present. Weber stated that KDHE anticipates completing this second five-year review by August 22, with soil drilling activities to be completed in July.

For information regarding the five-year review process and how to participate, please contact Rob Weber, KDHE project manager, at (785) 296-8801 or <a href="mailto:rweber@kdhe.state.ks.us">rweber@kdhe.state.ks.us</a>.

C:\TEMP\C.Notes.Data\02-132.wpd

www.kdhe.state.ks.us

pio@kdhe.state.ks.us

APPENDIX B

Please note that "O&M" is referred to throughout this checklist. At sites where Long-Term Response Actions are in progress, O&M activities may be referred to as "system operations" since these sites are not considered to be in the O&M phase while being remediated under the Superfund program.

## Five-Year Review Site Inspection Checklist (Template)

(Working document for site inspection. Information may be completed by hand and attached to the Five-Year Review report as supporting documentation of site status. "N/A" refers to "not applicable.")

I. SITE INF	ORMATION 5/1/02 AND
Site name: Ackansas Gty Duro	Date of inspection: 7/3/02
Location and Region: Acknows City CC (Region) I	EPA ID: KSD 980 500 789
Agency, office, or company leading the five-year review: KDHE/BER	Weather/temperature: Clear & Dieecast & 80 F.
Access controls	Monitored natural attenuation Groundwater containment Vertical barrier walls
Attachments: Inspection team roster attached	Site map attached
II. INTERVIEWS	(Check all that apply)
1. O&M site manager CURT RECLARD  Name  Interviewed at site at office by phone Phone  Problems, suggestions; Report attached NO DE	GTTMANAGER 5/1/02  Title Date  PORLEMS WERE TOENTIGEN
Interviewed at site at office by phone Phone	YEMPLOYEE 5/1/62  Title Date eno.  DRIEMS WERE IDEATIFIED

	Agency N/A = NOT APPlicate Contact	<i>y</i> . <		
	Name	Title	Date	Phone no
	Problems; suggestions; Report attached			
	Agency			
	Contact Name			
	Problems; suggestions; Report attached	Title	Date	Phone no.
	Agency			
	ContactName	Title		
	Problems; suggestions; Report attached		Date	Phone no.
	Agency			·
	Contact Name	Title	77-4-	
	Problems; suggestions; Report attached	Title	Date	Phone no.
_				
	Other interviews (optional) Report attached		· · · · · · · · · · · · · · · · · · ·	<u>.                                    </u>
<u> </u>	)/A			
			<del></del>	
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			···	
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			***************************************	

	III. ON-SITE DOCUMENTS & REC	ORDS VERIFIED (C	neck all that app	ly)
l <b>.</b>	O&M Documents O&M manual As-built drawings Maintenance logs Remarks	Readily available Readily available Readily available	Up to date Up to date Up to date	N/A N/A N/A
	Site-Specific Health and Safety Plan Contingency plan/emergency response plan Remarks	Readily available Readily available	Up to date Up to date	N/A N/A
,	O&M and OSHA Training Records Remarks	Readily available	Up to date	N/A
	Permits and Service Agreements Air discharge permit Effluent discharge Waste disposal, POTW Other permits Remarks	Readily available Readily available Readily available Readily available	Up to date Up to date Up to date Up to date	
	Gas Generation Records Readily			
	Remarks	available Up to	date N/A	<u> </u>
<del></del>	Remarks	Readily available	Up to date	
	Settlement Monument Records Remarks	Readily available	Up to date	
,	Settlement Monument Records Remarks  Groundwater Monitoring Records Remarks	Readily available	Up to date	(NA)
	Settlement Monument Records Remarks  Groundwater Monitoring Records Remarks  Leachate Extraction Records Remarks  Discharge Compliance Records Air	Readily available Readily available	Up to date Up to date	NA N/A

··-	·		IV. O&M COSTS		•
			17. O&M COS15		
1.		y in-house TOF ARKA	Contractor for State Contractor for PRP Contractor for Federa	al Facility	
2.	O&M Cost Reco Readily availa Funding mech Original O&M co	ble Up to da anism/agreement in post estimate	blace Bre		
	•	Total annual cost	by year for review per	riod if available	•
	FromDate	To	Total cost	Breakdown attached	
	FromDate	To	Total cost	Breakdown attached	
	From Date From	_ To Date _ To	Total cost	Breakdown attached	
	Date From	Date To	Total cost	Breakdown attached  Breakdown attached	
	Date	Date	Total cost	Dicardown and Cher	
3.	Unanticipated or Describe costs an	r Unusually High O d reasons: _ いん	&M Costs During R	eview Period	-
	V. ACCI	ESS AND INSTITU	TIONAL CONTRO	LS Applicable N/A	,
A. Fen	icing				
1.	Fencing damaged	d Location	shown on site map	Gates secured N/	
B. Oth	er Access Restrict	ions			
1.		security measures OS ARC POSCO OS TREATOR ARC	Location show		

C. In	stitutional Controls (ICs)				
1.	Implementation and enforcement Site conditions imply ICs not properly implemented Site conditions imply ICs not being fully enforced		Yes Yes	No No	N/A N/A
	Type of monitoring (e.g., self-reporting, drive by)				
	Responsible party/agency CITY of APKANSAS CITY				
	Contact CHRT FREELAND CITTY  Name Title	14NAGUR	<i>5/1/0</i> Date		Phone no.
	Reporting is up-to-date Reports are verified by the lead agency		Yes Yes	No No	N/A N/A
	Specific requirements in deed or decision documents ha Violations have been reported Other problems or suggestions: Report attached	ive been met	Yes Yes	No No	N/A N/A
2.	Adequacy ICs are adequate				
D. Ger	Remarks	ICs are inadequ	inte		N/A
1.	Vandalism/trespassing Location shown on site ma	ip <u>No va</u>	ndalism e	vident	>
2.	Land use changes on site N/A Remarks				
3.	Land use changes off site N/A Remarks				
	VI. GENERAL SITE CON	NDITIONS			
A. Ros	ads Applicable N/A				
1,	Roads damaged Location shown on site ma	p Roads	adequate	>	N/A

	Remarks PIN	
		<u> </u>
···	VII I ANDELLI COVERG	
_		le_) N/A
. L.	Landfill Surface	
	Settlement (Low spots) Location shown on site me	Settlement not evident
	Areal extent Depth	
	Remarks	
•	Cracks Location shown on site ma	p Cracking not evident
	Lengths Widths Depths	Cracking not evident
	Remarks	<u> </u>
	Erosion Location shown on site ma	Erosion not evident
	Areal extent Depth Remarks	
	Remarks	
	Holes Location shown on site ma	p Holes not evident
	Areal extent Depth	
	Remarks	•
	Vegetative Cover Grass Covet properly es	
	Trees/Shrubs (indicate size and locations on a diagram)	
	Remarks	
	Alternative Cover (armored rock, concrete, etc.)	N/A
	Remarks	
	Bulges Location shown on site ma	
	Bulges Location shown on site may Areal extent Height	p Bulges not evident
	Remarks	* * *

ſ			The state of the s
8.	Wet Areas/Water Damage	Wet areas/water damage not e	vident
[	Wet areas	Location shown on site map	Areal extent
	Ponding	Location shown on site map	Areal extent
	Seeps	Location shown on site map	Areal extent
	Soft subgrade	Location shown on site map	Areal extent
	Remarks		
9.	Slope Instability Slides Areal extent Remarks	Commence of the commence of th	No evidence of slope instability
В,	Benches Applicable (Horizontally constructed mound in order to slow down the velocit channel.)	ds of earth placed across a steep landity of surface runoff and intercept and	Ifill side slope to interrupt the slope d convey the runoff to a lined
1.	Flows Bypass Bench Remarks	Location shown on site map	N/A or okay
2.	Bench Breached Loc Remarks	cation shown on site map	N/A or okay
3.	Bench Overtopped Remarks	Location shown on site map	N/A or okay
C.	Letdown Channels Applicable (Channel lined with erosion contraction side slope of the cover and will a landfill cover without creating erosion.)	trol mats, riprap, grout bags, or gabio	ons that descend down the steep ne benches to move off of the
1.	Settlement Loc Areal extent Remarks	cation shown on site map No. 6	eyidence of settlement)
2.	Material Degradation Loc Material type Remarks	Cation shown on site map No e	evidence of degradation
3.	Erosion Loc Areal extent Remarks	cation shown on site map No e	evidence of erosion
			· · · · · · · · · · · · · · · · · · ·

4.	Undercutting Location shown on site map  Areal extent Depth  Remarks
5.	Obstructions Type
6.	Excessive Vegetative Growth  No evidence of excessive growth  Vegetation in channels does not obstruct flow  Location shown on site map  Remarks  Areal extent  Remarks
1.	Gas Vents Active Passive Properly secured/locked Functioning Routinely sampled Good condition  Evidence of leakage at penetration Needs Maintenance  N/A  Remarks
2.	Gas Monitoring Probes Properly secured/locked Functioning Routinely sampled Good condition Evidence of leakage at penetration Needs Maintenance N/A Remarks
3.	Monitoring Wells (within surface area of landfill) Properly secured/locked Functioning Routinely sampled Good condition Evidence of leakage at penetration Needs Maintenance N/A Remarks
4.	Leachate Extraction Wells  Properly secured/locked Functioning Routinely sampled Good condition  Evidence of leakage at penetration Needs Maintenance N/A  Remarks
5.	Settlement Monuments Located Routinely surveyed N/A  Remarks

E.	Gas Collection and Treatment	Applicable	N/A		
1.	Gas Treatment Facilities Flaring Good condition Remarks	Thermal destruction Needs Maintenance	Collection for reuse		
2.	Gas Collection Wells, Man Good condition Remarks	ifolds and Piping Needs Maintenance			<del></del> -
3.	Gas Monitoring Facilities ( Good condition Remarks	(e.g., gas monitoring of a Needs Maintenance	adjacent homes or buildings) N/A	)	- -
F.	Cover Drainage Layer	Applicable	N/A	:	<u></u>
1.	Outlet Pipes Inspected Remarks	Eunctioning	N/A	-	_
2.	Outlet Rock Inspected Remarks	Functioning	) N/A		
G.	Detention/Sedimentation Ponds	Applicable	N/A		
1.	Siltation Areal extent Siltation not evident Remarks	Depth_		N/A	<u>.</u>
2.	Erosion Areal exter	nt Dep	oth		· .
3.	Outlet Works Remarks	Functioning N/A			
4.	Dam Remarks	Functioning N/A			

H. R	etaining Walls	Applicable N/A	
1.	Deformations Horizontal displacement Rotational displacement Remarks	Vertical di	ap Deformation not evident splacement
2.	Degradation Remarks	Location shown on site m	ap Degradation not evident
I. Pei	imeter Ditches/Off-Site Di	scharge Applica	N/A Calc
1.	Siltation Loca Areal extent Remarks	tion shown on site map Silt Depth	ation not evident
2.	Vegetative Growth  Vegetation does not im  Areal extent  Remarks	Туре	
3.	Erosion Areal extent Remarks		
4.	Discharge Structure Remarks	Functioning N/A	
	VIII. VER	FICAL BARRIER WALLS	Applicable N/A
1.	Settlement Areal extent Remarks	Location shown on site ma Depth	p Settlement not evident
2.	Performance not monitor		Evidence of breaching

	IX. GROUNDWATER/SURFACE WATER REMEDIES Applicable
A. G	roundwater Extraction Wells, Pumps, and Pipelines Applicable N/A
1.	Pumps, Wellhead Plumbing, and Electrical Good condition All required wells properly operating Needs Maintenance N/A Remarks
2.	Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances Good condition Needs Maintenance Remarks
3.	Spare Parts and Equipment Readily available Good condition Requires upgrade Needs to be provided Remarks
B. St	urface Water Collection Structures, Pumps, and Pipelines Applicable N/A
1.	Collection Structures, Pumps, and Electrical  Cood condition  Needs Maintenance  Remarks
2.	Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances Good condition Needs Maintenance Remarks
3.	Spare Parts and Equipment  Readily available, Good condition Requires upgrade Needs to be provided  Remarks

c.	Treatment System	Applicable	(N/A)	
1.	Others Good condition Sampling ports prop	Oil/w Carbo  tion agent, flocculent  Needs erly marked and func- ice log displayed and	ater separation on adsorbers  Maintenance tional	Bioremediation
	Quantity of groundy	vater treated annually water treated annually	/	
2.	Electrical Enclosures N/A G Remarks	ood condition	rated and functional Needs Maintenan	
3.	Tanks, Vaults, Storag N/A Ge Remarks	ood condition	Proper secondary	containment Needs Maintenance
4.	Discharge Structure i N/A Go Remarks	od condition	Needs Maintenand	e
5.		ood condition (esp. rooment properly stored		Needs repair
6.	Monitoring Wells (pur Properly secured/loc All required wells to Remarks	ked Functioning	Routinely sampled	Good condition N/A
D. F	Monitoring Data N/A			
1.	Monitoring Data	submitted on time	Is of acceptab	le quality
2.	Monitoring data sugges Groundwater plume	ts: is effectively contains	ed Contaminant o	concentrations are declining

D. Monitored Natural Attenuation
Monitoring Wells (natural attenuation remedy)     Properly secured/locked Functioning Routinely sampled Good condition     All required wells located Needs Maintenance  Remarks
x. other remedies P/X
If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.
XI. OVERALL OBSERVATIONS
A. Implementation of the Remedy
Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).  The peraction of effective and functioning. We eroson or BARESPOTS were NOTED ON THE SOIL TRATIENT CONTAINANT -Cell COVER - WATER IS Effectively drawed from the sign via construction concrete DRAINGE CULCERIS AND DITCHES - RIP RAPIRMAUSIN PLACE AND THE RETENTION FOUND IS INTAIT.
B. Adequacy of O&M
Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.  The CITY MAINTAINS THE SITE TAROUGH REGULAR MOUNG.  AND WRITIATION THAT SIGNS REMAIN DOSTED. THE CITY HAS  POSSUED THAT TOSTITUTIONAL CONTROLS ARE ENCOCCED.

C.	Early Indicators of Potential Remedy Problems $\sim /_{\nearrow}$
	Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be compromised in the future.
-	
D.	Opportunities for Optimization P/A
	Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.

# ARK. SAS CITY SUPERFUND ST. OPERATION AND MAINTENANCE PLAN INSPECTION CHECKLIST

1.0	General I	nformation: FIVE-TEAR REUIEW INSPECTION
	1.1 Ins	pector: Robert J. Weber
		e: 7/3/0 <sup>1</sup>
	1.3 Dat	e of Last Inspection: MATI, 7002
2.0	Inspection	n and Maintenance
	2.1 Sur	face Features
•	2.1.1 Veg	etative Cover
•	a.	Routine Maintenance-Describe Activity: MOWING
	b.	Damages Noted From Last Inspection:YesNo
	c.	If yes, have they been repaired?YesNo New Damages Noted - Describe:
	•	
	2/47 2 2000	face Erosion
	a.	Routine Inspection Activity: 5/TE WALK FOR
	α.	FUE YEAR REVIEW
	b.	Erosion Noted in Last Inspection: YesNo
		If yes, describe:
	c.	New Erosion Noted (note if the 1% gravel layer is visible):
	2 1 3 1.00	k for and note evidence of the following items:
		x for and hote evidence of the following frems.
	<u>~/</u> a.	Removal of waste material or hazardous substances left at the site at the conclusion of the remedial action;
	MA b.	Transport, disposal , abandonment, or placement of waste material, hazardous substances, or solid waste at the site;
		Removal or altering of the "No Dumping" signs installed on site;
	MA a.	Construction of structure, permanent or otherwise, such as buildings through the soil cap;
	<u>~/</u> A e.	Change or altering of the drainage surface water flow patterns onto or from the site;

# ARKAN S CITY SUPERFUND SITE OPERATION AND MAINTENANCE PLAN INSPECTION CHECKLIST

(CONTINUED)

PATE: 7/3/62

MA	£.	Pumping, extracting, or injecting water causing a change in
NA		the groundwater level of more than one foot;
~/A	g.	Extraction of groundwater for domestic use or consumption or for use in food preparation or handling;
MA		Removal or damage to elevation monuments or monitoring wells left at the site;
		Production of food or crops at the site for human or animal consumption, or production of food or crops using water or soil form the site for human or animal consumption;
V/A-	j.	Alteration modification or removal of the vegetative cover installed as part of the remedial action;
	k.	Use of herbicides, pesticides, fertilizers, or other agricultural chemicals which are not approved for use by EPA for the site or the use of products in a manner inconsistent with the label instructions;
1/A-	l.	Heavy equipment on the site;
/ <u>A-</u>	m.	Storage of commercial products or chemicals on the site in quantities other than those which are necessary for the day-to-day operations of any EPA and KDHE approved occupants; and
<u>/A</u>	n.	Dumping of gravel or any small (1-inch or less in diameter) rock onto the site.
Obse:	rvatio	ons: SITE ANDRADS TO BEMAINTAINED IN 6000 CONDITION
<u>w.T</u>	H SI	GNS POST AROUND THE DRRIMETER.
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		[ Robert 5- Wolson 7/3/02
	INSPI	CTOR KOHE/BER DATE

APPENDIX C

		HTW	DRILL	INC	) LC	)G				но	E NO.
				DRILLING *	SUBCON	TRACTOR					ET 1 / SMEETS Q
A RKANSAS CITT DUMP 1840 MILLIKEN REFINELT					4 LOCATION SOUTH OF						
E MANE OF DOUGE					B. MANI	JFACTURER'S	DESIGN	IATION OF DRILL	•	<u> </u>	<u> </u>
7 SIZES AND TYPES OF DRILLING GOOFROBE 5400				8 HOLE	LOCATION	· · · · · ·			<u> </u>		
G EQUI							<u>کئے ۔</u> د اند	E WISIBL	E 144	JE A	REA
							- K	<sup>3</sup> /A-			
<u> </u>				<del> </del>	10 DAT	E STARTED T	7/3	102	11. DATE CO	MPLETED	7/3/62
n Thici	KNESS >	121			15: DEP	TH GROUNDW	ATER E	NCOUNTERED ,	A		
ED INT	O ROCK	1	<del> </del>		16. D€P	TH TO WATER	AND EI	LAPSED TIME AFT	ER DRILLING C	OMPLETED	
H OF H	OLE /2 /	· · · · · · · · · · · · · · · · · · ·	<del></del> -		17 OTH	ER WATER LE	VEL ME	ASUREMENTS (SF	PECIFY		
AL SAN		DISTURBED	UND	STURBED	15	TOTAL NUN	(BER O	F CORE BOXES	A 1 /		<u> </u>
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OF HO	LE	BACKFILLED	<u> </u>	<del></del>	OTHER	(SPECIFY)	23. (	SIGNATURE OF IN	AP5CTOR/	Ala	25, Web
		BESTON, TE	7	A				D	file	<u> </u>	
тн	DES	SCRIPTION OF MATERIALS		RES	Ut T9	OR CORE BO	OX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS		REMARKS
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DRILLING SUBCONTRACTOR  KONE/BER  THEY BAR REVIEW  AS CITT DUAP BUD MILLIKED REFINEET 1/707 W. MAC  BE SUFFER REVIEW  BE SUFFLING GOOFROBE STOO B. HOLE LOCATION A  RESO FORLING GOOFROBE STOO B. HOLE LOCATION A  ALEXANDLER B. SAMPLER B. SUBFACE ELEVATION A  ALEXANDLER B. SUBFACE ELEVATION A  ALEXANDLER WATER AND BE  INTO ROCK  I TO DATE STAFTEO 7/3  IN DEPTH GROUNDWATER BE  IN TO THER WATER LEVEL ME  IN TO BESCRIPTION OF MATERIALS  CONTROLL BACKFILLED MOINTORNING WELL OTHER ISPECIFY)  IN DESCRIPTION OF MATERIALS  CONTROLL BACKFILLED MOINTORNING WELL OTHER ISPECIFY)  IN DESCRIPTION OF MATERIALS  CONTROLL BACKFILLED MOINTORNING WELL OTHER ISPECIFY)  AND CORE BOX NO.  CAST. SOME GREANIL MATTER  DESCRIPTION OF MATERIALS  CONTROLL BACKFILLED  DARK BROWN SILT CAST  TRACE SLUT  TRACE SLUT  TRACE SLUT  TRACE CLAUSE  INSDIEN STILT CAST  INSDIEN STILL CAST  INSDIEN STILT CAST  INSDIEN STILT CAST  IN STILL CAST	ME KDHE/BER  2 DRILING SUBCONTRACTOR KONE/BER  WEYBAR REVIEW AS CITT DUMP 1010 MILLIKED REFINERT / 1409 W. MADISON A AS CITT DUMP 1010 MILLIKED REFINERT / 1409 W. MADISON A AS CITT DUMP 1010 MILLIKED REFINERT / 1409 W. MADISON A ASSOCIATION OF DRILING SEQUIPMENT FORD F-350 W. CST STOP & 1/5 MI  MALRO SAMPLER 8 SUBCONTRACTOR SEQUIPMENT FORD F-350 W. CST STOP & 1/5 MI  MALRO SAMPLER 8 SUBCONTRACTOR ALEGATE LINER 10 DATE STATED 7/3/02  ITHICKNESS > 12 IS DEPTH GROUNDWATER ENCOUNTERED IN THICKNESS > 12 IS DEPTH GROUNDWATER ENCOUNTERED IN THICKNESS > 12 IS DEPTH TO WATER AND ELAPSED THE ATT  MADISON IN THE WATER LOVE MEASUREMENTS IN A ICHEMICAL ANALYSIS VOC METALS OTHER ISPECIFY OTHER ISPECIFY  N/A N/A N/A PH  DESCRIPTION OF MATERIALS FIELD SCREENING GEOTECH SAMPLE ANALYTICAL  MESSAULT STATE  MALE SALT  TRACE SELT  TRACE SELT	ED HTO ROCK  IN THE MALE SAME SHOULD SHOULD BE CONTRACTOR  IN THE MALE SAME SHOULD SHOULD BE CONTRACTOR  IN THE STATE TO STALL BE SHOULD SHOULD BE CONTRACTOR  IN THE STATE TO SHOULD ALL MALE SAME SHOULD BE SECRETION OF DRILLING SHOULD BE SHOULD B	ME KDHE BER  2. DRILLING SUPCONTRACTOR  SOLUTION BS CITT DUAP BUD MILLIKEN REFINEDT 1/79 LD MADISON ACKANGES CIT  AS CITT DUAP BUD MILLIKEN REFINEDT 1/79 LD MADISON ACKANGES CIT  BED STOND CREGAN  S. MANDENDRING SEQUENTION OF SIRLL  S. COPPOSED S TOO  S. 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MRK 55-2

OLD MILLIKEN REFINERT

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ARKANSAS CITT DUMP/OLD MILLIKEN REFINERT

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MRK #8 55-2

LARKANSAS GTTDUMPT OLD MILLIKEN REFINERT

APPENDIX D



## Kansas Department of Health and Environment Division of Health and Environmental Laboratories Forbes Field, Building 740

Topeka, Kansas 66620-0001

Lab Number:	
Date Received:	
Analysis Codo	

### Sample Submission Form

Outside outsinssion Form						
Report To: KOS Weber Address: 1000 SW JACKSON, SUITE 40 TO PEKA, KANSAS WIGHT - 1867						
Collection Site: D-1 ( 4-3 ) ARK GTT DUMP						
Site ID Number: Collection Depth:						
Sample Type: Water Soil Sediment Sludge Air Oil Solid Liquid Wipe Priority: Regular Moderate Urgent						
Sample Collector: Rob Weber KOHE/RER/ARS Date: 07-03-02 Time: 0840						
Program EA EB EC ED EE EF EG EJ EL EP ER ET EW ES EK IM SC SE SG SN SD CW						
Code: PC PD PE PI PP PT PU PV WE WI HD HF HL HS RP AR GS KC US AQ RT WC						
Organic Chemistry Laboratory						
Check Desired Analysis: Other VOC Sample Acidified: []						
U Volatiles Method: ☐ 624 ☐ 8260 ☐ 524.2 ☐ Pesticides Method: ☐ 608 ☐ 8080 ☐ 507/8						
☐ Acids Method: ☐ 625 ☐ 8270 ☐ Base/Neutrals Method: ☐ 625 ☐ 8270 ☐ 525.2						
PCB's Method: 608 8080 Oil Herbicides Method: 615 8150 515.1						
ONE 462 SOIL TAR Inorganic Chamieta, Laboratori						
Inorganic Chemistry Laboratory						
Bottle Nos.: Chem DO NUT HM CN O&G Phenol						
Check Desired Analysis: 4 Other plt by Sto-846 9040						
Metals Mercury Mineral TCLP						
Radiation Chemistry Laboratory						
Check Desired Analysis: Other						
Gross Alpha Gross Uranium Ra-226 Ra-228						
Sample Comments: ET OR "EZ" for SPACIAL PROJECTS billing - STATE GENERAL FUND						
Chain of Custody: ARK GITT BOLLAP C2-015 COCCG9						
Date 7/3/02 Relinquished By Received By						
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Additional Reports Routed To: 2002 JUL -3 PM 3! 48						
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instructions for this form are printed on the reverse side



### Kansas Department of Health and Environment Division of Health and Environmental Laboratories Forbes Field, Building 740

Topeka, Kansas 66620-0001

Lab Number:	
Date Received:	
Analysis Code:	

Oample Submission Form
Report To: Kob Weber Address: 1000 SW JACKSON SUITE 410 TOREKA, KANSAS GUCH J 7367
Collection Site: 15-1 15 (17-75) ARK GTY DUMA
Site ID Number: Collection Depth:
Sample Type: Water Soil Sediment Sludge Air Oil Solid Liquid Wipe Priority: Regular Moderate Urgent
Sample Collector: Rob Weber KOHE/BERIARS Date: 07-03-03 Time: 1000
Name Agency (Abbr) Mo Day Yr 24 Hour
Program EA EB EC ED EE EF EG EL EL EP ER ET EW ES FK LM SC SE SG SN SP SW Code: PC PD PE PI, PP PT PU PV WE WI HD HF HL HS RP AR GS KC US AQ RT WC
Organic Chemistry Laboratory
Check Desired Analysis: Other VOC Sample Acidified:
Volatiles Method:         □ 624         □ 8260         □ 524.2         □ Pesticides         Method:         □ 608         □ 8080         □ 507/8
Acids Method: 625 8270 Base/Neutrals Method: 625 8270 525.2
☐ PCB's Method: ☐ 608 ☐ 8080 ☐ Oll ☐ Herbicides Method: ☐ 615 ☐ 8150 ☐ 515.1
ONE 462 SOIL TAR Inorganic Chemistry Laboratory
Bottle Nos.; Chem DO NUT HM CN O&G Phenol —
Check Desired Analysis: Other PH by Sub-846 9040
Metals Mercury Mineral TCLP
Radiation Chemistry Laboratory
Check Desired Analysis: Other
Gross Alpha Gross Uranium Ra-226 Ra-228
Sample Comments: ET OR EZ" FOR SPACIAL PROJECTS SITILLY -STATE GENERAL FUND
Chain of Custody:  Sample Comments: ET OR EZ" FOR SPECIAL PROJECTS SILLY: -STATE GENERAL FUND  ARK GT POILMP CD-018 - CECCS P
Date 7/3/02 Relinquished By Received By GIM
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Date Relinquished By Received By LABORATORIES
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## Kansas Department of Health and Environment Division of Health and Environmental Laboratories Forbes Field, Building 740

Topeka, Kansas 66620-0001

Lab Number:	
Date Received:	
Analysis Code:	

Sample Submission Form

A, Cample Capitinssion Form
Report To: Kob Weber Address: 100 SW TAKKEN, SUITE 410  Collection Site: B-1 (9-10') ARK CITY DUMP TOPEKA TOPEKA 66612-13
Site ID Number: Collection Depth: Feet
Sample Type: Water Soil Sediment Sludge Air Oil Solid Liquid Wipe Priority: Regular Moderate Urgent
Sample Collector: Rob Weber KNHE/BER/ARSDate: 07-03-02 Time: 0960
Name Agency (Abbr) Mo Day Yr 24 Hour
Code: PC PD PE PI PP PT PU PV WE WI HD HF HL HS RP AR GS KC US AQ RT WC
Organic Chemistry Laboratory
Check Desired Analysis: Other
Volatiles Method:         □ 624         □ 8260         □ 524.2         □ Pesticides         Method:         □ 608         □ 8080         □ 507/8
Acids Method: 625 8270 Base/Neutrals Method: 625 8270 525.2
PCB's Method: G08 G80 G0ii Gerbicides Method: G15 G8150 G515.1
CNE 402 SOIL TAR Inorganic Chemistry Laboratory
Bottle Nos.: Chem DO NUT HM CN O&G Phenol
Check Desired Analysis: W Other PH by SW-846 9040
Metals Mercury Mineral TCLP
Radiation Chemistry Laboratory
Check Desired Analysis: Other
Gross Alpha Gross Uranium Ra-226 Ra-228
Sample Comments: EJ OR "EZ" FUR Special projects billing - STATE-GENERAL FIRM
Chain of Custody:  ARK CITY Date P C2-C18-CECE9
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## Kansas Department of Health and Environment Division of Health and Environmental Laboratories Forbes Field, Building 740

Topeka, Kansas 66620-0001

Lab Number:	
Date Received:	

Sample Submission Form Analysis Code:
Report To: Kols Weber Address: 1600 500 JACKSON SUITE 410
Collection Site: 13-2 ( 97-5 ) ARK GITY Dump
Site ID Number: PWS Acct. No.  Collection Depth:
Sample Type: Water Soil Sediment Sludge Air Oil Solid Liquid Wipe Priority: Regular Moderate Urgent
Sample Collector: Kub Weber KOHE/BERIARS Date: 07-03-02 Time: 0935
Program EA EB EC ED EE EF EG ED EL EP ER ET EW ES FK LM SC SE SG SN SP SW
Code: PC PD PE PI PP PT PU PV WE WI HD HF HL HS RP AR GS KC US AQ RT WC
Organic Chemistry Laboratory
Check Desired Analysis: Other VOC Sample Acidified:
Volatiles Method:         □ 624         □ 8260         □ 524,2         □ Pesticides         Method:         □ 608         □ 8080         □ 507/8
☐ Acids Method: ☐ 625 ☐ 8270 ☐ Base/Neutrals Method: ☐ 625 ☐ 8270 ☐ 525.2
PCB's Method:         □ 608 □ 8080 □ Oil         □ Herbicides Method:         □ 615 □ 8150 □ 515.1
ONG FOR SYLLTAR Inorganic Chemistry Laboratory
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Bottle Nos.: Chem DO NUT HM CN O&G Phenol Check Desired Analysis: U Other PH by 503-846 9040
Metals Mercury Mineral TCLP
Radiation Chemistry Laboratory
Check Desired Analysis: Other
Gross Alpha Gross Uranium Ra-226 Ra-228
Sample Comments: EI OR "EZ" PLR SPRINT PROJECTS Willing - STATE GENERAL FUND
Chain of Custody: ARK GTY Dump Ca-018-00009
Date 7/3/02 Relinquished By Received By
Date Relinquished By Received By
Received By DIV. OF HALES  Additional Reports Routed To:  Received By DIV. OF HALES  LABORATORIES
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Forbes Field, Building 740 Topeka, Kansas 66620-0001

Lab Number:	·
Date Received:	
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Sample Submission Form Analysis Code:
Report To: Rob Were Address: DO SW JACKSON SINTE 410 TOPEKA, KANSAS GOOD -1364
Collection site: 15-2 ( 1-10 ) ARK CITY Dump
Site ID Number: Collection Depth:
Sample Type: Water Soll Sediment Sludge Air Oil Solid Liquid Wipe Priority: Regular Moderate Urgent
Sample Collector: Ab Weber KOIC/BER/ARS Date: 67-03-02 Time: 0945
Program EA EB EC ED EE EF EG EJ EL EP ER ET EW ES FK LM SC SE SG SN SP SW Code: PC PD PE PI PP PT PU PV WE WI HD HF HL HS RP AR GS KC US AQ RT WC
Organic Chemistry Laboratory
Check Desired Analysis: Other
Volatiles Method:         ☐ 624         ☐ 8260         ☐ 524.2         ☐ Pesticides         Method:         ☐ 608         ☐ 8080         ☐ 507/8
☐ Acids Method: ☐ 625 ☐ 8270 ☐ Base/Neutrals Method: ☐ 625 ☐ 8270 ☐ 525.2
PCB's Method: 608 608 00 0il Herbicides Method: 615 8150 515.1
CNE YOZ SILJAR Inorganic Chemistry Laboratory
Bottle Nos.: Chem DO NUT HM CN O&G Phenol
Check Desired Analysis: Other CH by Sw-846 9040
Metals Mercury Mineral TCLP
Radiation Chemistry Laboratory
Check Desired Analysis: Other
Gross Alpha Gross Uranium Ra-226 Ra-228
Sample Comments: ET OR "EZ" POR Special DRUGERS HILLIAM - STATE GENERAL FUND
Chain of Custody:  ARK CITY DUMP CD-015-000059
Date 7/3/02 Relinquished By Received By
Date Relinquished By Received By
Date Polinguished Bu
Additional Reports Routed To:    LABURATION
Name Address



Forbes Field, Building 740 Topeka, Kansas 66620-0001

Lab Number:	
Date Received:	
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Sample Submission Form
Report To: Rob Weber Address: 1000 Sw. TACKSON, SWITE 410
Collection Site: 15-5(4-5') ARK CITY DUMP
Site ID Number: Collection Depth:
Sample Type: Water Soil Sediment Sludge Air Oil Solid Liquid Wipe Priority: Regular Moderate Urgent
Sample Collector: Rob Weber KOHE/BGE/ARS Date: 07-03-02 Time: 10 20 Name Agency (Abbr) Mo Day Yr 24 Hour
Program EA EB EC ED EE EF EG ED EL EP ER ET EW ES FK LM SC SE SG SN SP SW Code: PC PD PE PI PP PT PU PV WE WI HD HF HL HS RP AR GS KC US AQ RT WC
Organic Chemistry Laboratory
Check Desired Analysis: Other VOC Sample Acidified: []
☐ Volatiles Method: ☐ 624 ☐ 8260 ☐ 524.2 ☐ Pesticides Method: ☐ 608 ☐ 8080 ☐ 507/8
☐ Acids Method: ☐ 625 ☐ 8270 ☐ Base/Neutrals Method: ☐ 625 ☐ 8270 ☐ 525.2
PCB's Method:         ☐ 608         ☐ 8080         ☐ Oil         ☐ Herbicides         Method:         ☐ 615         ☐ 8150         ☐ 515.1
Bottle Nos.: Chem DO NUT HM CN O&G Phenol Check Desired Analysis: Mercury Mineral TCLP
Radiation Chemistry Laboratory
Check Desired Analysis: Other
Gross Alpha Gross Uranium Ra-226 Ra-228
Chain of Custody:  Date 7/3/02 Relinquished By  Received By  Additional Reports Routed To:  Name Address  Address
Name Address



Forbes Field, Building 740 Topeka, Kansas 66620-0001

Lab Number:	·
Date Received:	
Analysis Code:	

Sample Submission Form

Report To: Poly 1 Johan Address NOO SW TAXKOW SWT = 4410
Report To: Rik Weber Address: NOO SW TACKSON, SINTE 410 TOPICKA, KANSAS WILLIAM WILLIAM WILLIAM SINTE 410  Collection Site: B-3 D (14-15) ARK CITY DUMP
Legal Project Code Name PWS Acct. No.
Site ID Number: Collection Depth: Feet
Sample Type: Water Soll Sediment Sludge Air Oil Solid Liquid Wipe Priority: Regular Moderate Urgent
Sample Collector: Rob Weber KOHE/BER /ARS Date: 67-03-02 Time: 1100
Name Agency (Abbr) Mo Day Yr 24 Hour Program EA EB EC ED EE EF EG ED EL EP ER ET EW ES FK LM SC SE SG SN SP SW
Code: PC PD PE PI PP PT PU PV. WE WI HD HF HL HS RP AR GS KC US AQ RT WC
Organic Chemistry Laboratory
Check Desired Analysis: Other VOC Sample Acidified:
☐ Volatiles Method: ☐ 624 ☐ 8260 ☐ 524.2 ☐ Pesticides Method: ☐ 608 ☐ 8080 ☐ 507/8
☐ Acids Method: ☐ 625 ☐ 8270 ☐ Base/Neutrals Method: ☐ 625 ☐ 8270 ☐ 525.2
☐ PCB's Method: ☐ 608 ☐ 8080 ☐ Oil ☐ Herbicides Method: ☐ 615 ☐ 8150 ☐ 515.1
(NG 40% SAL JAR Inorganic Chemistry Laboratory
Bottle Nos.: Chem DO NUT HM CN O&G Phenol
Check Desired Analysis: DOther PH by SID-844, 9040
Metals Mercury Mineral TCLP
Radiation Chemistry Laboratory
Check Desired Analysis: Other
Gross Alpha Gross Uranium Ra-226 Ra-228
C Gross Aprila C Gross Oranium C Ra-220 C Ra-220
Sample Comments: ET OR "EZ" FOR THOUGHT SILLING - STATE GENERAL FAND
Chain of Custody:  ARR CITY De. mp C2-C18-CCC9
Date 7/3/02 Relinquished By Received By Received By
Date Relinquished By Received By DIV. OF H&E
. I 121 1 PC 161 -
Pate Relinquished By Received By PH 31 49  Additional Reports Routed To:
Name Address
Name Address
Name Address

instructions for this form are printed on the reverse aide



## Kansas Department of Health and Environment Division of Health and Environmental Laboratories Forbes Field, Building 740

Topeka, Kansas 66620-0001

Lab Number:	
Date Received:	<del></del>
Analysis Cades	

Sample Submission Form Analysis Code:
Report To: Rob Weber Address: 100 5W JACKEN SUITE 410
Collection Site: 13-3 (970) ARK CITY DUMP
Legal Project Code Name PWS Acct. Site ID Number: Collection Depth:
Sample Type: Water Soil Sediment Sludge Air Oil Solld Liquid Wipe Priority: Regular Moderate Ung
Sample Collector: Rob Weber KOHE/BAR JARS Date: 07-03-02 Time: 1039
Name  Agency (Abbr)  Mo Day Yr  24 Hour  Program EA EB EC ED EE EF EG ED EL EP ER ET EW ES FK LM SC SE SG SN SP SW  Code: PC PD PE PI PP PT PU PV WE WI HD HF HL HS RP AR GS KC US AQ RT WC
Organic Chemistry Laboratory
Check Desired Analysis: Other
Volatiles Method: ☐ 624 ☐ 8260 ☐ 524.2 ☐ Pesticides Method: ☐ 608 ☐ 8080 ☐ 507/8
PCB's Method: 608 8080 Oil Herbicides Method: 615 8150 515.1
CNE 407 SOL SAR Inorganic Chemistry Laboratory
Check Desired Analysis: Cother Not have Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State of the Solve State
Check Desired Analysis: A Other Atl by Sw-846 7040
Metals Mercury Mineral TCLP
Radiation Chemistry Laboratory
Check Desired Analysis: Other
Gross Alpha Gross Uranium Ra-226 Ra-228
ample Comments: ET 02 "EZ" FOR Spain   PROJATS billing - STATE GENERAL FUND
haln of Custody: ARK CAT OLIMP CO-018-00009
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## Kansas Department of Health and Environment Division of Health and Environmental Laboratories Forbes Field, Building 740 Topeka, Kansas 66620-0001

Lab Number:	
Date Received:	
Analysis Code:	

Samp	le Su	bmissio	n Form

Report To: Kob Weber Address:
Collection Site: B-4 (4-5') ARKGTT Dump
Legal Project Code Name PWS Acct. No. Site ID Number: Collection Depth:
Sample Type: Water Soil Sediment Sludge Air Oil Solid Liquid Wipe Priority: Regular Moderate Urgent
Sample Collector: Rob Webur KOHE/BER/ARS Date: 07-03-02 Time: 1/15
Name Agency (Abbr) Mo Day Yr 24 Hour Program EA EB EC ED EE EF EG EL EL EP ER ET EW ES FK LM SC SE SG SN SP SW Code: PC PD PE PI PP PT PU PV WE WI HD HF HL HS RP AR GS KC US AQ RT WC
Organic Chemistry Laboratory
Check Desired Analysis: Other VOC Sample Acidified:
U Volatiles Method: ☐ 624 ☐ 8260 ☐ 524.2 ☐ Pesticides Method: ☐ 608 ☐ 8080 ☐ 507/8
Acids Method: 625 8270 Base/Neutrals Method: 625 8270 525.2
☐ PCB's Method:         ☐ 608         ☐ 8080         ☐ Oil         ☐ Herbicides Method:         ☐ 615         ☐ 8150         ☐ 515.1
ONE 40% SCIL STAR Inorganic Chemistry Laboratory
Bottle Nos.: Chem DO NUT HM CN O&G Phenol
Check Desired Analysis: 4 Other pt by SW-846 7040
Metals Mercury Mineral TCLP
Padiation Chamietre I sharetone
Radiation Chemistry Laboratory
Check Desired Analysis: Other
Check Desired Analysis: Other Gross Alpha Gross Uranium Ra-226 Ra-228
Check Desired Analysis: Other
Check Desired Analysis: Other  Gross Alpha Gross Uranium Ra-226 Ra-228  Sample Comments: ET OR "EZ" FOR SPACIA   projects billing - STATE GENERAL FOR O
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Check Desired Analysis: Other  Gross Alpha Gross Uranium Ra-226 Ra-228  Sample Comments: ET or "EZ" for special projects billing - STATE Control France  Chain of Custody:  Date 7/3/02 Relinquished By Received By Received By  Received By
Check Desired Analysis: Other  Gross Alpha Gross Uranium Ra-226 Ra-228  Sample Comments: ET or "EZ" for special projects billing - STATE GONCOAL FOND  Chain of Custody:  Date 7/3/02 Relinquished By Received By Received By  Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By
Check Desired Analysis: Other  Gross Alpha Gross Uranium Ra-226 Ra-228  Sample Comments: ET or "EZ" for special projects billing - STATE GONCOAL FOND  Chain of Custody:  Date 7/3/02 Relinquished By Received By Received By  Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By Received By
Check Desired Analysis:  Gross Alpha  Gross Uranium  Ra-226  Ra-228  Sample Comments:  ET or "EZ" for special projects billing - STATE GOLDAN FOLO  Chain of Custody:  Date 7/3/02 Relinquished By  Received By  Received By  Received By  Received By  Additional Reports Routed To:



Forbes Field, Building 740 Topeka, Kansas 66620-0001

Lab Number:	
Date Received:	
Analysis Codo	

Sample Submission Form
Report To: Rob Weber Address: 1000 Sw JACKSON SUITE 40 TOPEKA, KANSAS GWAZ-13LT
Collection site: 15-7 C 1710 J AICK CITY DUMP
Legal Project Code Name PWS Acct. No. Site ID Number: Collection Depth:
Sample Type; Water Soil Sediment Sludge Air Oil Solid Liquid Wipe Priority: Regular Moderate Urgent
Sample Collector: Rob Weber KDHE/BER/ARS Date: 07-03-02 Time: 1/30
Name Agency (Abbr) Mo Day Yr 24 Hour Program EA EB EC ED EE EF EG EL EL EP ER ET EW ES FK LM SC SE SG SN SP SW Code: PC PD PE PI PP PT PU PV WE WI HD HF HL HS RP AR GS KC US AQ RT WC
Organic Chemistry Laboratory
Check Desired Analysis: Other VOC Sample Acidified:
Volatiles Method:         □ 624         □ 8260         □ 524.2         □ Pesticides         Method:         □ 608         □ 8080         □ 507/8
☐ Acids Method: ☐ 625 ☐ 8270 ☐ Base/Neutrals Method: ☐ 625 ☐ 8270 ☐ 525.2
PCB's Method: 608 8080 OII Herbicides Method: 615 8150 515.1
CNE 402 SIL SAR Inorganic Chemistry Laboratory
Bottle Nos.: Chem DO NUT HM CN O&G Phenol
Check Desired Analysis: 4 Other 14 by SW-846 7040
Metals Mercury Mineral TCLP
Radiation Chemistry Laboratory
Check Desired Analysis: Other
Gross Alpha Gross Uranium Ra-226 Ra-228
Sample Comments: EJ OR "EZ" FOR SPECIAL DROJECTS BILLING - STATE GENERAL FUND
Chain of Custody: ARKGICT DUMP C2-018-0009
Date 7/3/02 Relinquished By Received By 9 M
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## Kansas Department of Health and Environment Division of Health and Environmental Laboratories Forbes Field, Building 740

Topeka, Kansas 66620-0001

Lab Number:	
Date Received:	
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Sample Submission Form

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Report To: Rob Weber Address: 1000 SW JACKSON, SUITE 410
Collection Site: TRUE BUANK TO CARK CITT DUMP)
Site ID Number: PWS Acct. No.  Collection Depth: Feet
Sample Type: (Water) Sediment Sludge Air Oil Solid Liquid Wipe Priority: Regular Moderate Urgent
Sample Collector: Rob Waser Knike/Berlans Date: 07-01-02 Time: 1130
Name Agency (Abbr) Mo Day Yr 24 Hour Program EA EB EC ED EE EF EG EL EP ER ET EW ES FK LM SC SE SG SN SP SW
Code: PC PD PE PI PP PT PU PV WE WI HD HF HL HS RP AR GS KC US AQ RT WC
Organic Chemistry Laboratory
Check Desired Analysis: Other
Volatiles Method:         □ 624         □ 8260         □ 524.2         □ Pesticides         Method:         □ 608         □ 8080         □ 507/8
☐ Acids Method: ☐ 625 ☐ 8270 ☐ Base/Neutrals Method: ☐ 625 ☐ 8270 ☐ 525.2
PCB's Method:   608   8080   Oil   Herbicides Method:   615   8150   515.1
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UNDRESERVED VON UIAL Inorganic Chemistry Laboratory
Bottle Nos.: Chem DO NUT HM CN O&G Phenol
Check Desired Analysis: Other pl+ b. EPA 150.1
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Metals Mercury Mineral TCLP
Radiation Chemistry Laboratory
Check Desired Analysis: Other
Gross Alpha Gross Uranium Ra-226 Ra-228
Sample Comments: EJ OR "EZ" FOR SOUCIAL DROJETS billing - STATE GRORAL FAMO
Chain of Custody: ARK GTT Dam P C2-018-0009
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Additional Reports Routed To:  Name Address Address Address Received By
Name Address 2002 JUL -3
Name Address
Name Address



## Kansas Department of Health and Environment Division of Health and Environmental Laboratories Forbes Field, Building 740

Topeka, Kansas 66620-0001

Lab Number:	
Date Received:	
Analysis Code:	

## Sample Submission Form

Report To: Ros Weber Address: 1000 SW TACK SW SWITE 410 TOPEKA KANSAS 666613-1367
Collection Site: KINSCATE BLANK - I
Legal Project Code Name PWS Acct. No. Site ID Number: Collection Depth:
Sample Type: Water Soil Sediment Sludge Air Oil Solid Liquid Wipe Priority: Regular Moderate Urgent
Sample Collector: Rob Weber KOHEBERIARS Date: 07-03-02 Time: 1000
Name Agency (Abbr) Mo Day Yr 24 Hour Program EA EB EC ED EE EF EG ED EL EP ER ET EW ES FK LM SC SE SG SN SP SW Code: PC PD PE PI PP PT PU PV WE WI HD HF HL HS RP AR GS KC US AQ RT WC
Organic Chemistry Laboratory
Check Desired Analysis: Other VOC Sample Acidified: [
☐ Volatiles Method: ☐ 624 ☐ 8260 ☐ 524.2 ☐ Pesticides Method: ☐ 608 ☐ 8080 ☐ 507/8
☐ Acids Method: ☐ 625 ☐ 8270 ☐ Base/Neutrals Method: ☐ 625 ☐ 8270 ☐ 525.2
☐ PCB's Method: ☐ 608 ☐ 8080 ☐ Oil ☐ Herbicides Method: ☐ 615 ☐ 8150 ☐ 515.1
UNDERSERVED VOA. VIAL Inorganic Chemistry Laboratory
Bottle Nos.: Chem DO NUT HM CN O&G Phenol
Check Desired Analysis: 2 Other pt 5, EPA 150, 1
Metals Mercury Mineral TCLP
Radiation Chemistry Laboratory
Check Desired Analysis: Other
Gross Alpha Gross Uranium Ra-226 Ra-228
Sample Comments: ES OR "EZ" FOR SPECIAL PROPERTY BILLY - STATE GONDRAL FORD
Chain of Custody:  ARICUCITY DUMA 62-018-01005
Date 7/3/02 Relinquished By Received By
Date Relinquished By Received By
Date Reinquished By
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APPENDIX E



Kansas Department of Health and Environment Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001

#### REPORT OF ANALYSIS



BUREAUC

#### INORGANIC CHEMISTRY

Report To: Bureau of Env. Remediation

Curtis SOB, Suite 410 ATTN: Rob Weber

Topeka KS 66612

Date/Time Collected: 07/03/02 08:40

Lab Number: 400215PT

4EM80

Site ID:

Account Code: EZ

Collection Location: B-1 (4-5') Ark City Dump C2-018-00009

Matrix: Soil

Collect Depth: Date/Time Received: 07/03/02 15:48

Sample Comments:

Collector: Rob Weber

Parameter	Analytical Result	Units	Analysis Date	Analytical Method
рH	8.16	pH unit	07/15/02	EPA 150.1

Reporting Analyst: REH Date Reported: 07/16/02 Copies To: File

Not Detected at Indicated Level



Kansas Department of Health and Environment RECEL Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001

#### REPORT OF ANALYSIS

JUL 177

BUREAU OF

INORGANIC CHEMISTRY

PROVMENTAL REMEDIATION

Report To: Bureau of Env. Remediation Curtis SOB, Suite 410

ATTN: Rob Weber

Topeka KS 66612

Date/Time Collected: 07/03/02 10:00

Lab Number: 400219PT

Site ID;

Account Code: EZ

4EM80

Collection Location: B-1D(14-15') Ark City Dump C2-018-00009 Collector: Rob Weber

Matrix: Soil

.1 Collect Depth: Date/Time Received: 07/03/02 15:48

Sample Comments:

Parameter	Analytical Result	Units	Analysis Date	Analytical Method
рн	8.10	pH unit	07/15/02	EPA 150.1

Reporting Analyst: REH Date Reported: 07/16/02

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Holding Time Exceeded

(785) **296-**1645



Kansas Department of Health and Environment Forbes Field, Bldg. 740, Topeka, Kansas 66620-000 ECEIVE

#### REPORT OF ANALYSIS

JUL 1 7 2002



INORGANIC CHEMISTRY

BUREAU OF **ENVIRONMENTAL REMEDIATION** 

Report To: Bureau of Env. Remediation Curtis SOB, Suite 410

ATTN: Rob Weber

Topeka KS 66612

Lab Number: 400216PT

4EM80

Site ID:

Account Code: EZ

Collection Location: B-1 (9-10') Ark City Dump C2-018-00009 Collector: Rob Weber Date/Time Collected: 07/03/02 09:00

Matrix: Soil

Collect Depth:
Date/Time Received: 07/03/02 15:48

Sample Comments:

Parameter	Analyticel Result	Units	Analysis Date	Analytical Method
на	8.77	pH unit	07/15/02	EPA 150.1

Reporting Analyst: REH Date Reported: 07/16/02 Copies To: File

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Kansas Department of Health and Environment RECEIVE Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001

#### REPORT OF ANALYSIS

BUREAU OF ENVIRONMENTAL REMEDIATION

#### INORGANIC CHEMISTRY

Report To: Bureau of Env. Remediation Curtis SOB, Suite 410

ATTN: Rob Weber Topeka KS 66612

4EM80

Site ID: Account Code: EZ

Collection Location: B-2(4-5') Ark City Dump C2-018-00009

Collect Depth:

Lab Number: 400217PT

Collector: Rob Weber Matrix: Soil

Date/Time Collected: 07/03/02 09:35

Date/Time Received: 07/03/02 15:48

Sample Comments:

Parameter	Analytical Result	Units	Analysis Date	Analytical Method
рн	12.41	pH unit	07/15/02	EPA 150.1

Reporting Analyst: REH Date Reported: 07/16/02

Copies To: File

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Kansas Department of Health and EnvironmenRECEIVE Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001

JUL 1 7 200

BUREAU OF

ENVIRONMENTAL REMEDIATION

Site ID:

Account Code: EZ

4EM80

### REPORT OF ANALYSIS

INORGANIC CHEMISTRY

Lab Number: 400218PT

Report To: Bureau of Env. Remediation

Curtis SOB, Suite 410 ATTN: Rob Weber Topeka KS 66612

Collection Location: B-2(9-10') Ark City Dump C2-018-00009 Collector: Rob Weber Matrix: Soil Date/Time Collected: 07/03/02 09:45 Date/

Collect Depth:
Date/Time Received: 07/03/02 15:48

Sample Comments:

Parameter	Analytical Result	Units	Analysis Date	Analytical Method
рH	6.30	pH unit	07/15/02	EPA 150.1

Reporting Analyst: REH Date Reported: 07/16/02 Copies To: File

- Not Detected at Indicated Level - Holding Time Exceeded

Serology

Virology.



Kansas Department of Health and Environment Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001 [ ]

#### REPORT OF ANALYSIS

JUL 17 2002

INORGANIC CHEMISTRY

BUREAU OF ENVIRONMENTAL REMEDIATION

Report To: Bureau of Env. Remediation

Curtis SOB, Suite 410

ATTN: Rob Weber Topeka KS 66612

Site ID:

Lab Number: 400221PT

Account Code: EZ

4EM80

Collection Location: B-3(4-5') Ark City Dump C2-018000009
Collector: Rob Weber Matrix: Soil

Collector: Rob Weber
Date/Time Collected: 07/03/02 10:20

.l Collect Depth: Date/Time Received: 07/03/02 15:48

Sample Comments:

Parameter	Analytical Result	Units	Analysis Date	Analytical Method
рн	12.44	pH unit	07/15/02	EPA 150.1

Reporting Analyst: REH Date Reported: 07/16/02

Copies To: File

Not Detected at Indicated Level



Kansas Department of Health and Environment Forbes Field, Bldg. 740, Topeka, Kansas 66620-000ECEIVE

#### REPORT OF ANALYSIS

JUL 1 7 2002

INORGANIC CHEMISTRY

**BUREAU OF** ENVIRONMENTAL REMEDIATION

Report To: Bureau of Env. Remediation

Curtis SOB, Suite 410

ATTN: Rob Weber Topeka KS 66612

Lab Number: 400223PT

Site ID:

4EM80

Account Code: EZ

Collection Location: B-3D(14-15') Ark City Dump C2-018-00009
Collector: Rob Weber Matrix: Soil
Date/Time Collected: 07/03/02 11:00 Date/Time

Collect Depth:
Date/Time Received: 07/03/02 15:48

Sample Comments:

Parameter	Analytical Result	Units	Analysis Date	Analytical Method
рн	12.39	pH unit	07/15/02	EPA 150.1

Reporting Analyst: REH Date Reported: 07/16/02 Copies To: File

Not Detected at Indicated Level



Kansas Department of Health and Environment. Forbes Field, Bldg. 740, Topeka, Kansas 66620 660 EIVE

#### REPORT OF ANALYSIS

JUL 1 7 2002



4EM80

**BUREAU OF** RONMENTAL REMEDIATION

INORGANIC CHEMISTRY

Report To: Bureau of Env. Remediation Curtis SOB, Suite 410

ATTN: Rob Weber

Topeka KS 66612

Site ID:

Lab Number: 400222PT

Account Code: EZ

Collection Location: B-3(9-10') Ark City Dump C2-018-00009 Collector: Rob Weber

Matrix: Soil Date/Time Collected: 07/03/02 10:35

Collect Depth: Date/Time Received: 07/03/02 15:48

Sample Comments:

Parameter	Analytical Result	<i>Units</i>		Analytical Method
рн	12.39	pH unit	07/15/02	EPA 150.1

Reporting Analyst: REH Date Reported: 07/16/02 Copies To: File

Not Detected at Indicated Level



Kansas Department of Health and Environment ECEIVE Forbes Field, Bldg. 740, Topeka, Kansas 66620-000T

JUL 1 7 2002

**SUREAU OF** 

Lab Number: 400224PT

Account Code: EZ

Site ID:

4 EM80

#### REPORT OF ANALYSIS

#### INORGANIC CHEMISTRY

Report To: Bureau of Env. Remediation

Curtis SOB, Suite 410

ATTN: Rob Weber Topeka KS 66612

Collection Location: B-4(4-5') Ark City Dump C2-018-00009 Collector: Rob Weber Matrix: Soil Date/Time Collected: 07/03/02 11:15 Date

.l Collect Depth: Date/Time Received: 07/03/02 15:49

Sample Comments:

Parameter.	Analytical Result	Units	Analysis Date	Analytical Method
рн	8.32	pH unit	07/15/02	EPA 150.1

Reporting Analyst: REH Date Reported: 07/16/02 Copies To: File

Not Detected at Indicated Level

Holding Time Exceeded

(785) 296-1645

Virology



Kansas Department of Health and Environment CEIVED Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001

#### REPORT OF ANALYSIS

**BUREAU OF** ENVIRONMENTAL REMEDIATION

JUL 1 7 2002

#### INORGANIC CHEMISTRY

Report To: Bureau of Env. Remediation

Curtis SOB, Suite 410

ATTN: Rob Weber

Topeka KS 66612

Date/Time Collected: 07/03/02 11:30

Collection Location: B-4(9-10') Ark City Dump C2-018-00009

Collect Depth:
Date/Time Received: 07/03/02 15:49

Matrix: Soil

Account Code: EZ

Lab Number: 400226PT

Site ID:

4EM80

Sample Comments:

Collector: Rob Weber

Parameter	Analytical Result	Units	Analysia Date	Analytical Method
рн	12.47	pH unit	07/15/02	EPA 150.1

Reporting Analyst: REH Date Reported: 07/16/02 Copies To: File

Not Detected at Indicated Level Holding Time Exceeded



Kansas Department of Health and EnvironmenRECEIVE Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001

JUL 1 7 200

#### REPORT OF ANALYSIS

BUREAU OF ENVIRONMENTAL REMEDIATION

#### INORGANIC CHEMISTRY

Report To: Bureau of Env. Remediation Curtis SOB, Suite 410 ATTN: Rob Weber

Topeka KS 66612

Matrix: Water

Site ID: Account Code: EZ

Lab Number: 400225PT

4EM80

Collection Location: Trip Blank-1 ARk City Dump C2-018-00009

Collector: Rob Weber Date/Time Collected: 07/03/02 11:30

er Collect Depth: Date/Time Received: 07/03/02 15:49

Sample Comments:

Parameter	Analytical Result	Units	Analysis Date	Analytical Method
PH	6.06	pH unit	07/15/02	EPA 150.1

Reporting Analyst: REH Date Reported: 07/16/02 Copies To: File

Not Detected at Indicated Level



Kansas Department of Health and Environment Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001

#### REPORT OF ANALYSIS

BUREAU OF ENVIRONMENTAL REMEDIATION

Lab Number: 400220PT

Account Code: EZ

Site ID:

4EM80

#### INORGANIC CHEMISTRY

Report To: Bureau of Env. Remediation Curtis SOB, Suite 410

ATTN: Rob Weber Topeka KS 66612

Collection Location: Rinsate Blank-1 Collector: Rob Weber Date/Time Collected: 07/03/02 10:00

Matrix: Water

Collect Depth:

Date/Time Received: 07/03/02 15:48

Sample Comments:

Parameter	Analytical Result	Units	Analysis Date	Analytical Method
рн	6.00	pH unit	07/15/02	EPA 150.1

Reporting Analyst: REH Date Reported: 07/16/02 Copies To: File

Not Detected at Indicated Level Holding Time Exceeded

Diagnostic Micro. Neonatal Screening Serology Virology

(785) 296-1636 (785) 296-1**6**51 (785) 296-1**6**53 (785) 208-1645